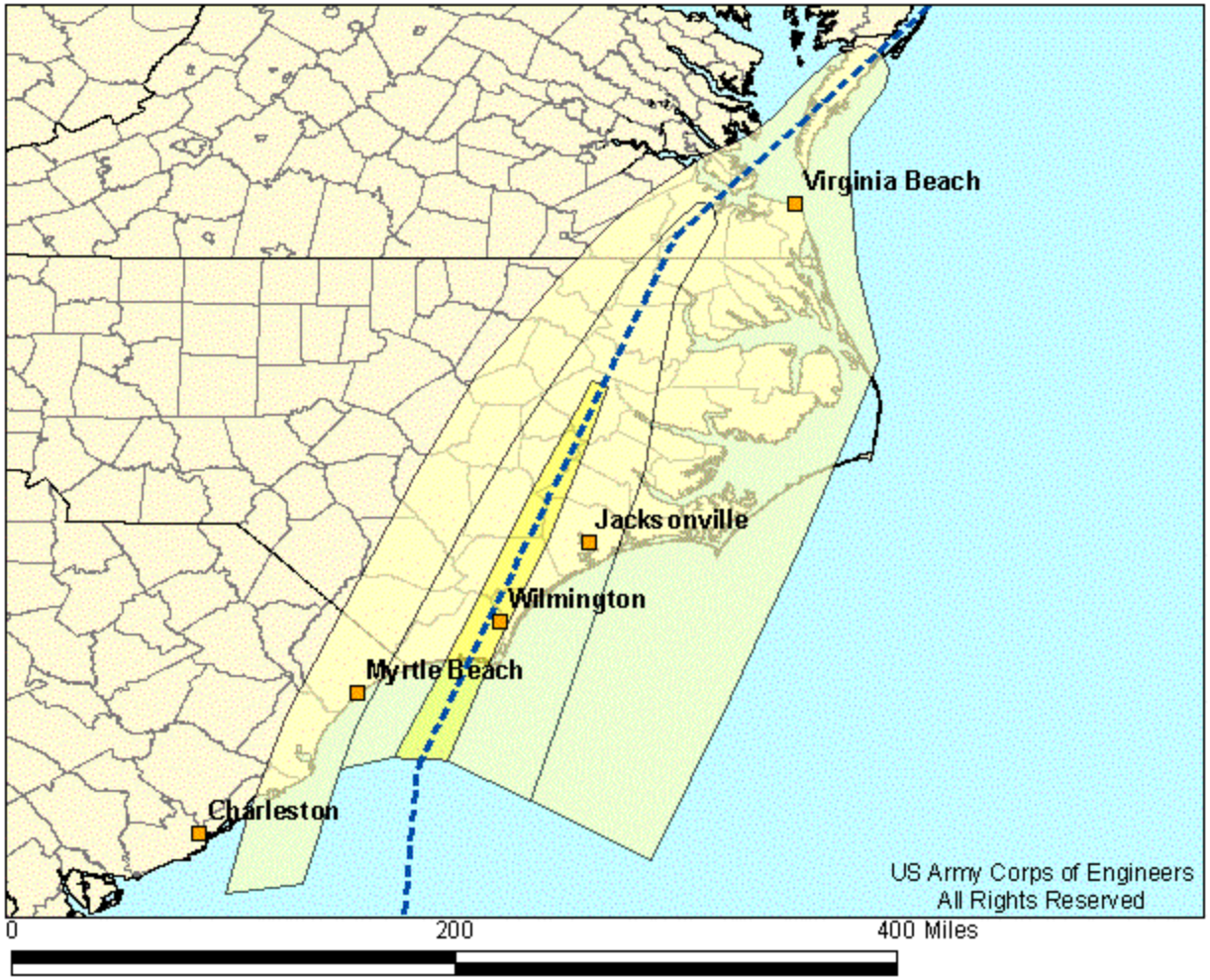
US Army Corps of Engineers

Hurricane Hanna Projected Damage Areas

Landfall Expected In About **10** Hours

For Planning Purposes Only!



Post Landfall Projected Damage Areas

This model is based on a Category 1 storm making landfall near Wilmington, NC.

Forecast Track
Historic Track

Projected Damage Areas

- CAT 0-type damage
- CAT 1-type damage
- CAT 2-type damage
- CAT 3-type damage
- CAT 4-type damage
- CAT 5-type damage

Information provided on this page displays a Category 1 storm making landfall near Wilmington, NC. These projections are based on information from the NHC (1700 EDT 09/05/2008) forecast.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Hanna Projected Damage Areas	
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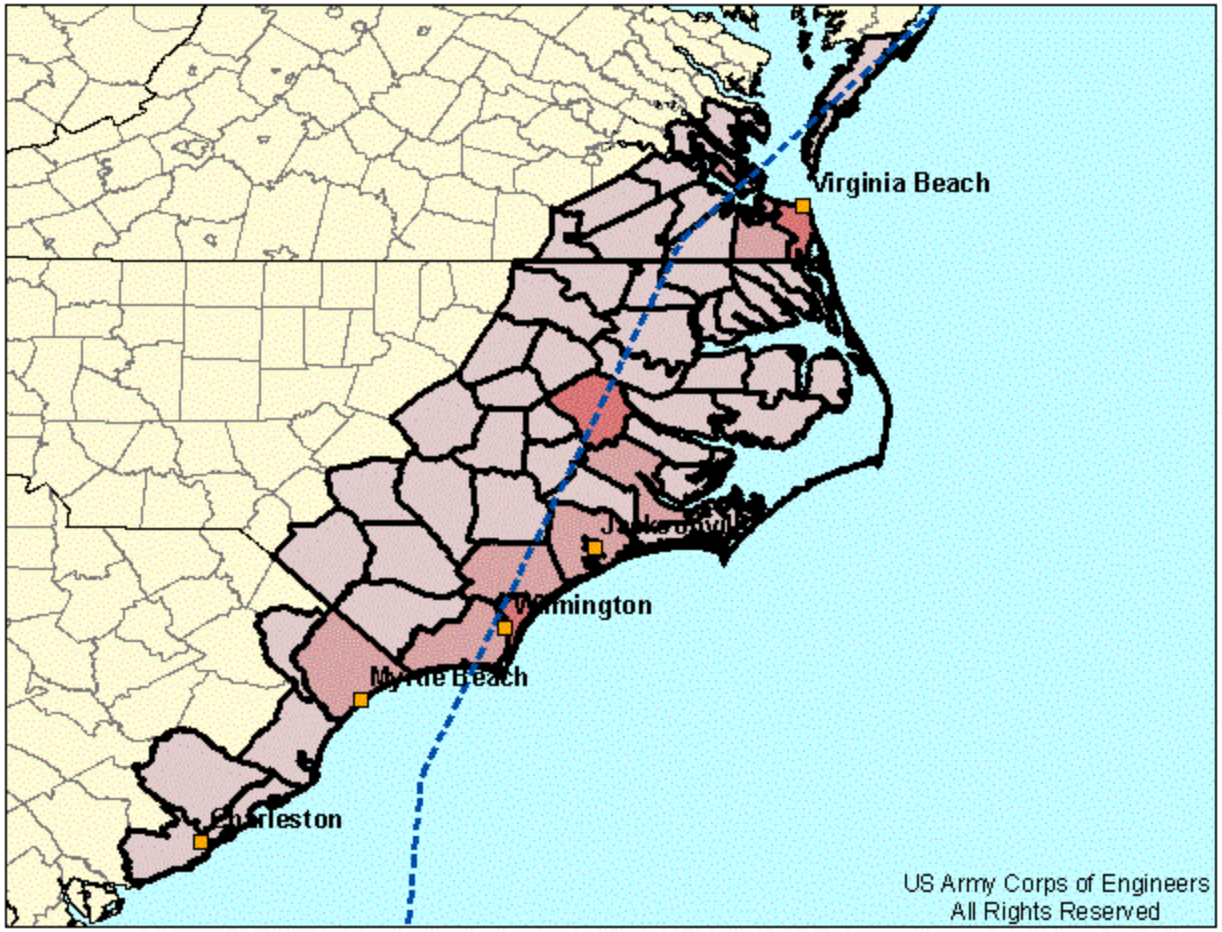
Sources: HURREVAC LRL-DEBRIS	Page 1 of 12

US Army Corps of Engineers

Hurricane Hanna Debris Model

Landfall Expected In About **10** Hours

For Planning Purposes Only!



Post Landfall Debris Model Results

North Carolina - 2,106,000 Yards
Virginia - 1,065,000 Yards
South Carolina - 255,000 Yards

Model results per County on following page

This model is based on a Category 1 storm making landfall near Wilmington, NC.

Forecast Track
Historic Track

Debris

- < 100,000 cubic yards
- 100,000 - 249,999 cubic yards
- 250,000 - 499,999 cubic yards
- 500,000 - 999,999 cubic yards
- >1,000,000 cubic yards

Information provided on this page displays a Category 1 storm making landfall near Wilmington, NC. These projections are based on information from the NHC (1700 EDT 09/05/2008) forecast. The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

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US Army Corps of Engineers

Hurricane Hanna Debris Model

Landfall Expected In About **10** Hours

For Planning Purposes Only!

State	Yards per State	County	Yards per County
North Carolina		Beaufort	62,000
		Bertie	29,000
		Bladen	24,000
		Brunswick	202,000
		Camden	7,000
		Carteret	47,000
		Chowan	9,000
		Columbus	45,000
		Craven	107,000
		Cumberland	< 1,000
		Currituck	15,000
		Dare	23,000
		Duplin	73,000
		Edgecombe	35,000
		Gates	13,000
		Greene	20,000
		Halifax	12,000
		Hertford	33,000
		Hyde	7,000
		Johnston	20,000
		Jones	22,000
		Lenoir	92,000
		Martin	30,000
		Nash	38,000
		New Hanover	380,000
		Northampton	12,000
		Onslow	181,000
		Pamlico	11,000
		Pasquotank	24,000
		Pender	102,000
		Perquimans	9,000

State	Yards per State	County	Yards per County
North Carolina (continued)		Pitt	251,000
		Robeson	< 1,000
		Sampson	38,000
		Tyrrell	5,000
		Washington	11,000
		Wayne	71,000
		Wilson	46,000
North Carolina	2,106,000		
South Carolina		Berkeley	< 1,000
		Charleston	2,000
		Georgetown	37,000
		Horry	216,000
		Marion	< 1,000
South Carolina	255,000		
Virginia		Accomack	18,000
		Chesapeake city	129,000
		Franklin City	7,000
		Gloucester	4,000
		Greensville	< 1,000
		Hampton City	98,000
		Isle Of Wight	24,000
		James City	2,000
		Mathews	< 1,000
		Newport News city	128,000
		Norfolk City	161,000
		Northampton	8,000
		Poquoson City	7,000

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

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Hurricane Hanna Debris Model

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Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Hanna Debris Model

Landfall Expected In About **10** Hours

For Planning Purposes Only!

State	Yards per State	County	Yards per County
Virginia		Portsmouth city	72,000
(continued)		Southampton	13,000
		Suffolk City	76,000
		Surry	2,000
		Sussex	< 1,000
		Virginia Beach city	286,000
		York	30,000
Virginia	1,065,000		

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

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Hurricane Hanna Debris Model

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Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Hanna Commodities Model

Landfall Expected In About **10** Hours

For Planning Purposes Only!

Post Landfall Water Model Results

Day One / Day Two / Day Three
North Carolina – 5/10/21
Truckloads

Model results per County on following page

This model is based on a Category 1 storm making landfall near Wilmington, NC.

Forecast Track
Historic Track

Commodities

- < 5 Trucks Each
- 5 - 10 Trucks Each
- 11 - 20 Trucks Each
- 21 - 40 Trucks Each
- > 40 Trucks Each

Information provided on this page displays a Category 1 storm making landfall near Wilmington, NC. These projections are based on information from the NHC ***(1700 EDT 09/05/2008)*** forecast. The amount of commodities forecasted is based on Mission Guide Book requirements and SME input. The graphic represents single day needs with full distribution system in place and operating.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Hanna Commodities Model	
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Hurricane Hanna Commodities Model

Landfall Expected In About **10** Hours

For Planning Purposes Only!

State	Truckloads per State	County	Truckloads per County
North Carolina		Brunswick	3
		Craven	1
		Duplin	1
		Greene	1
		Jones	1
		Lenoir	2
		New Hanover	5
		Onslow	1
		Pender	2
		Pitt	4
North Carolina	21		

The amount of commodities forecasted is based on Mission Guide Book requirements and SME input and the above table indicates suggested needs based on phased deployment of a commodities distribution system.

Details about this model may be obtained at http://www.englink.usace.army.mil
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Hurricane Hanna Commodities Model

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Siemsen, LRL 1710 EDT 09/05/2008

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Hanna Temporary Roofing Model

Landfall Expected In About **10** Hours

For Planning Purposes Only!

Post Landfall Temporary Roofing Model Results

North Carolina - 2,200

Model results per County on following page

This model is based on a Category 1 storm making landfall near Wilmington, NC.

Forecast Track
Historic Track

Temporary Roofing

- < 2,000 units
- 2,000 - 3,999 units
- 4,000 - 5,999 units
- 6,000 - 9,999 units
- > 10,000 units

Information provided on this page displays a Category 1 storm making landfall near Wilmington, NC. These projections are based on information from the NHC (1700 EDT 09/05/2008) forecast. Temporary roofing is based on 2% in CAT 1.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

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US Army Corps of Engineers

Hurricane Hanna Temporary Roofing Model

Landfall Expected In About **10** Hours

For Planning Purposes Only!

State	House Units per State	County	House Units per County
North Carolina		Brunswick	400
		Craven	< 100
		Duplin	< 100
		Greene	< 100
		Jones	< 100
		Lenoir	200
		New Hanover	800
		Onslow	< 100
		Pender	200
		Pitt	600
North Carolina	2,200		

Temporary roofing is based on 2% in CAT 1.

Details about this model may be obtained at http://www.enqlink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

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Hurricane Hanna Roofing Model

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Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Hanna Population Model

Landfall Expected In About **10** Hours

For Planning Purposes Only!

Post Landfall Population Model Results

North Carolina - 335,000

Model results per County on following page

This model is based on a Category 1 storm making landfall near Wilmington, NC.

Forecast Track
Historic Track

Population

- < 25,000 persons
- 25,000 - 99,999 persons
- 100,000 - 174,999 persons
- 175,000 - 249,999 persons
- > 250,000 persons

Information provided on this page displays a Category 1 storm making landfall near Wilmington, NC. These projections are based on information from the NHC (1700 EDT 09/05/2008) forecast. The numbers of persons included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values adjusted to July 2007 values).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Hanna Population Model	
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US Army Corps of Engineers

Hurricane Hanna Population Model

Landfall Expected In About **10** Hours

For Planning Purposes Only!

State	Population per State	County	Population per County
North Carolina		Brunswick	48,000
		Craven	< 1,000
		Duplin	10,000
		Greene	< 1,000
		Jones	3,000
		Lenoir	32,000
		New Hanover	107,000
		Onslow	10,000
		Pender	25,000
		Pitt	100,000
North Carolina	335,000		

The number of persons estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2007 values.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

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Hurricane Hanna Population Model

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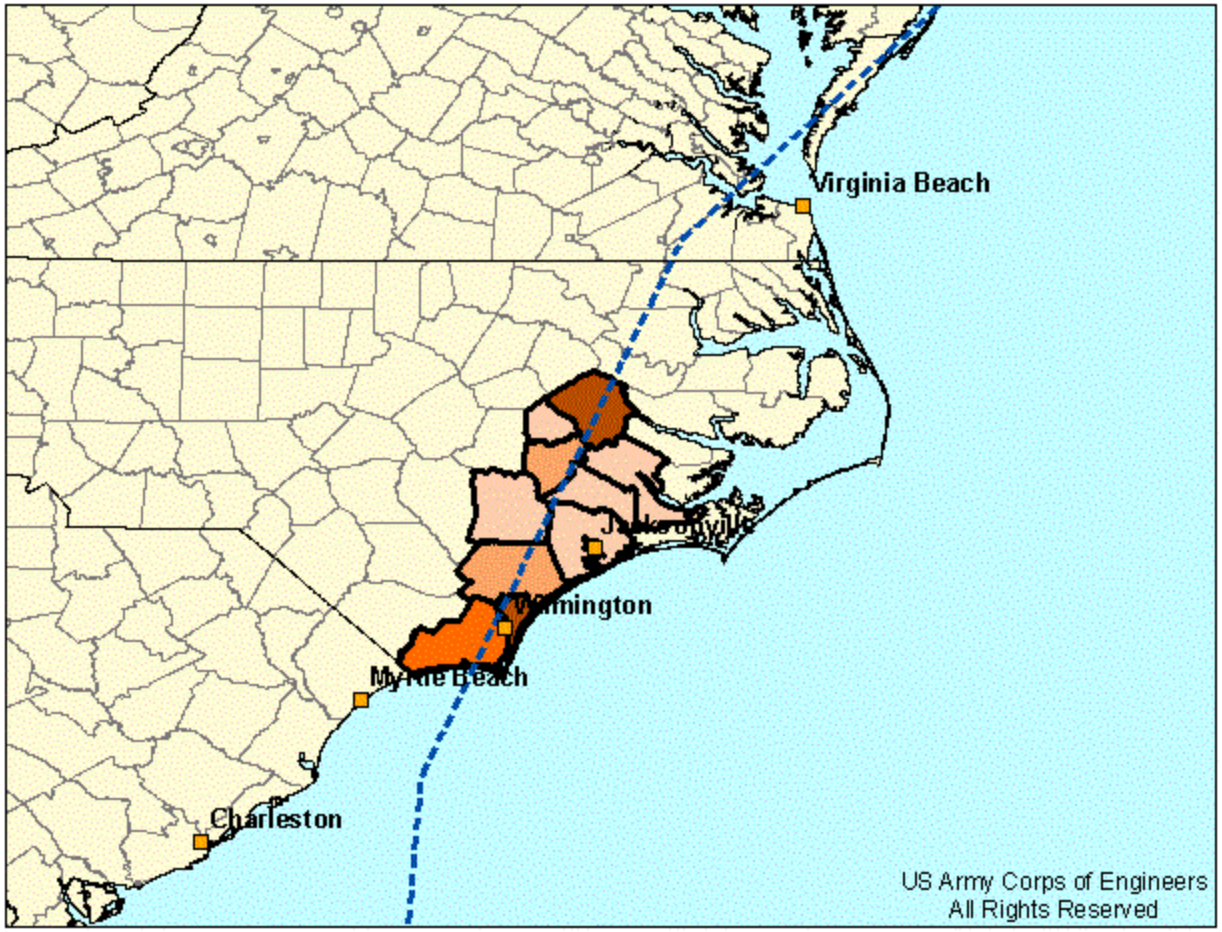
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Hanna Households Model

Landfall Expected In About **10** Hours

For Planning Purposes Only!



Post Landfall Households Model Results

North Carolina - 139,000

Model results per County on following page

This model is based on a Category 1 storm making landfall near Wilmington, NC.

Forecast Track
Historic Track

Households

- < 7,500 households
- 7,500 - 14,999 households
- 15,000 - 24,999 households
- 25,000 - 49,999 households
- > 50000 households

Information provided on this page displays a Category 1 storm making landfall near Wilmington, NC. These projections are based on information from the NHC (1700 EDT 09/05/2008) forecast. The numbers of households included in this model output are those that would be included within estimated hurrican e force winds (Census 2000 values adjusted to July 2007 values).

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US Army Corps of Engineers

Hurricane Hanna Households Model

Landfall Expected In About **10** Hours

For Planning Purposes Only!

State	Households per State	County	Households per County
North Carolina		Brunswick	20,000
		Craven	< 1,000
		Duplin	4,000
		Greene	< 1,000
		Jones	< 1,000
		Lenoir	14,000
		New Hanover	47,000
		Onslow	4,000
		Pender	10,000
		Pitt	40,000
North Carolina	139,000		

The number of households estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2007 values.

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